- (a) contacting said biological sample with one or more nucleic acid probes of HIV-1 selected from the group consisting of:
- (1) the probe corresponding to ORF-Q having the following nucleotide sequence:

4480 4490 4500 4510 4520 4530 GATGGCAGGT TGC CAAGAAGAAA AGCAAAGATC ATTAGGGATT ATGGAAAACA 4570 4580 4540 4550 560 ACAGGATGAG GATGATTGTG TGGCAAGTAG GATTAGAACA TGGAAAAGTT 4620 4590 4600 4610 4630 CCATATGTAT GTTTCAGGGA AAGCTAGGGG TAGTAAAACA ATGGTTTTAT 4640 4650 4660 4670 4680 AGACATCACT ATGAAAGCCC TCATCCAAGA ATAAGTTCAG AAGTACACAT 4690 4700 4730 4710 4720 TGGTAATAAC AACATATTGG GGTCTGCATA CCCACTAGGG GATGCTAGAT 4740 4750 4760 4770 4780 CAGGAGAAAG AGACT GCAT CTGGGTCAGG GAGTCTCCAT AGAATGGAGG 4790 480 4810 4820 4830 AAAAAGAGAT ATAGCACACA AGTAGACCCT GAACTAGCAG ACCAACTAAT 4860 4840 4870 4880 TCATCTGTAT TACTTTGACT GTTTTTCAGA CTCTGCTATA AGAAAGGCCT 4930 4890 /4900 4910 4920 TATTAGGACA TATAGTTAGC CCTAGGTGTG AATATCAAGC AGGACATAAC 4940 4950 4970 4980 4960 AAGGTAGGAT CTTGGCACTA GCAGCATTAA TAACACCAAA CTCTACAATA 5030 4990 5000 5010 5020 AAAGATAAAG CCACCTTTGC CTAGTGTTAC GAAACTGACA GAGGATAGAT 5040 5050 5060 5070 5080 CACAATGAAT *<u>¢CAGAAGACC</u>* AAGGGCCACA GAGGGAGCCA GGAACAAGCC

GGACAC;

(2) the probe corresponding to ORF-R having the

following/nucleotide sequence:

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					1					
8250		8260		8270	/	8280		8290		8300
	CAGGG	CTTGG	AAAGG2	TTTT	GCTATZ	AAGAT	GGGTG	GCAAG	TGGTC.	AAAAA
	0210		0220		6220		0240		0350	
				- /						
CCAGCA	GCAG	ATGGGG	11666	MGCMGC	AICI	CGAGA	CIGG	AAAAAC	AIGG	
							8440			
AGCAAT	CACA	AGTAGO	AATA	CAGCAG	CTAC	CAATG	CTGCT	TGTGCC	TGGC	
	8460		8470	/	8480		8490		8500	
TAGAAG	CACA	AGAGGA	GGAG	GAGGTO	GGTT	TTCCAC	STCAC	ACCTCA	GGTA	
	0510		0520		0520		0540		0550	
•		01-11-01		1						
		~~~~								
AAAAGA	AAAG	GGGGG	Crec	AAGGGC	TAAT	TCACTO	CCAA	CGAAGA	CAAG	
	8610									
ATATCC	TTGA	TCTGTG	GATC	TACCAC	CACAC	AAGGC	PACTT	CCCTG	TTGG	
	8660	- 1	8676		8680		8690		8700	
		CACCAG	GGCC 4	AGGG 61						
		\	- 1	- 1			0540		0750	
Oldelli	CILIO	CINCII	1	,						
AAGGAG.	AGAA	CACCAG	CTTG	TTACAC	CCTG	TGAGC	STGCA	TGGAAT	'GGA'I'	
	8810									
GACCCT	GAGA	GAGAAG	TGTT	AGAGTO	GAGG	TTTGA	CAGCC	GCCTAG	CATT	
	8860		8870		8890		8900			
		GCCCGA						AACTGO	:;	
			١.							
	(:	s) the	probe	corre	espond:	ing to	ORF-1	naving	tne	
follow	ing n	acleot/i	de sec	quence	:					
5030		5040		5050		5060		5070		5080
	GA GTAGTG CCAGCA AGCAAT TAGAAG CCTTTA AAAAGA ATATCC CAGAAC GTGCTA AAGGAG GACCCT TCATCA	GA CAGGGG  8310 GTAGTGTGGT  8360 CCAGCAGCAG  8410 AGCAATCACA  8460 TAGAAGCACA  CCTTTAAGAC  AAAAGAAAAG  ATATCCTTGA  8660 CAGAACTACA  8710 GTGCTACAAG  8760 AAGGAGAGAA  8760 AAGGAGAGAA  8760 AAGGAGAGAA  6760 AAGGAGAGAA  6760 AAGGAGAGAA  6760 AAGGAGAGAA  6760 AAGGAGAGAA  6760 CAGAACTACAGGAGAA  6760 AAGGAGAGAA  6760 AAGGAGAA  6760 AAGGAGAGAA  6760 AAGGAGAA  6760 AAGGAGAGAA  6760 AAGGAGAA  6	GA CAGGGCTTGG  8310 GTAGTGTGGT  8360 CCAGCAGCAG ATGGGG  8410 AGCAATCACA AGTAGC  TAGAAGCACA AGAGGAA  8510 CCTTTAAGAC CAATGA  8560 AAAAGAAAAG GGGGGA  ATATCCTTGA TCTGTG  CAGAACTACA CACCAG  8710 GTGCTACAAG CTAGTA  8860 GAGAACTACA GAGAAC  68760 AAGGAGAGAA CACCAG  8710 GTGCTACAAG CTAGTA  8760 AAGGAGAGAA CACCAG  8860 GACCCTGAGA GAGAAC  (3) the following nucleots	GA CAGGGCTTGG AAAGGA  8310  8320  GTAGTGTGGT TGGATGGCCT  8360  8410  8410  AGCAATCACA AGTAGCAATA  8460  TAGAAGCACA AGAGGAGGAGGAGC  CCTTTAACAC CAATGACTTA  8550  AAAAGAAAAG  6610  ATATCCTTGA TCTTGGATC  CAGAACTACA CACCAGGGCC  8710  GTGCTACAAG CTAGACAGAGAGAGAGAGAGAGAAC  8860  GACCCTGAGA GAGGAGGAGC  8710  GTGCTACAAG CTAGACTGG  8710  GTGCTACAAG CTAGACAGGGCC  8710  GACCCTGAGA GAGAGGTGTG  8860  GACCCTGAGA GAGAGGTGTG  8860  GACCCTGAGA GAGAGGTGTT  8860  TCATCACGTG GCCCGAGAGC  (3) the probe  following nucleotide sec	GA CAGGGCTTGG AAAGGATTTT  8310 8320 GTAGTGTGGT TGGATGGCCT ACTGT  8360 8370 CCAGCAGCAG ATGGGGTGGG AGCAGC AGCAGCAGC AGCAGCAGCAG AGTAGCAGTAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCA	GA         CAGGGCTTGG         AAAGGATTTT         CCTATE           8310         8320         8330           8360         8370         ACTGTAAGGG           CCAGCAGCAG         ATGGGGTGGG         AGCAGCATCT           8410         8420         8430           AGCAATCACA         AGTAGCAATA         CAGCAGCTAC           TAGAAGCACA         AGAGGAGGAG         GAGGTGGGT           TAGAAGCACA         AGAGGAGGAG         GAGGTGGGTT           CCTTTAAAGAC         CAATGACTTA         CAAGGCAGCT           AAAAGAAAAG         GGGGGACTGG         AAGGCAGCTAAT           8510         8520         AAGGCAGCTAAT           AATATCCTTGA         TCTGTGGATC         TACCACACAC           CAGGACTACA         AGGGCTAAT         AGGGGTCAACA           CAGGACTACA         ACCACAGGGCC         AGGGGTAAT           AATATCCTTGA         TCTGTGGATC         TACCACACAC           CAGGACTACA         AGGGGTCAGA         AGGGCTAAT           8610         8670         8680           AAGGAGAGAA         CACCAGGCTT         TTGACCCCAGA           AAGGAGAGAA         CACCAGGTT         TTACACCCTG           AAGGAGAGAA         ACACAGGTT         TACACACACA           AB10 <td< td=""><td>GA         CAGGGCTTGG         AAAGGATTTT         CCTATAAGAT           8310         8320         8330         AAAGAT           8360         8370         8380         AAAGAT           CCAGCAGCAG         ATGGGGTGGG         AGCAGCATCT         CGAGAC           8410         8420         8430         AGAGCATCC         CAATGC           AGCAATCACA         AGTAGCAATA         CAGCAGCTAC         CAATGC         CAATGC         TTCCAC           TAGAAGCACA         AGAGGAGGAG         GAGGTGGGTT         TTCCAC         TTCCAC         GTAGAT           CCTTTAAGAC         CAATGACTTA         CAAGGCAGCT         GTAGAT         GTAGAT         TCCACACAC         GTAGAT         GTAGAT         TCCACACACAC         AAGGCTAAT         TCCACACACAC         AAGGCTAAT         TCACTACACACAC         AAGGCTAAT         TACCACACACAC         AAGGCTACAC         AAGGCTACACACACACACACACACACACACACACACACAC</td><td>GA         CAGGGCTTGG         AAAGGATTTT         CCTATAAGAT         GGGTGG           8310         8320         8330         8340         8340           8360         8370         8380         8390         8390           CCAGCAGCAG         ATGGGGTGGG         AGCAGCATC         CGAGACCTGG         3430         8440           AGCAATCACA         AGTAGCAATA         CAGCAGCTAC         CAATGCTGCT         CAATGCTGCT         CAATGCTGCT           TAGAAGCACA         AGGAGGAGGAG         GAGGTGGGTT         TTCCAGTCAC         CAATGCTGCT           CCTTTAAGAC         CAATGACTTA         CAAGGCAGCT         GTAGATCTTA           8510         8520         8530         8540           CCTTTAAGAC         CAATGACTTA         CAAGGGCTAAT         TCACTCCCAA           8610         8520         8630         8590           AAAAGAAAAG         GGGGGACTGG         AAGGGCTAAT         TCACTCCCAA           8660         8670         8680         AAGGCTACT           CAGAACTACA         CACCAGGGCC         AGGGCTACT         TATCCACTGA           8710         8730         8740         8740           GTGCTACAGG         CACCAGGCTT         TTAGCCCTG         TAGGCCTGCA           AAGGAGAGA&lt;</td><td>GA CAGGGCTTGG AAAGGATTTT CCTATAAGAT GGGTGGCAAG  8310 8320 8330 8340 8340 8360 8370 8380 8380 8390 8390 CCAGCAGCAG ATGGGGTGGC AGCAGCATCT CGAGACCTGG AAAAAA  AGCAATCACA AGTAGCAATA CAGCAGCTAC CAATGCTGCT TGTGCC  TAGAAGCACA AGAGGAGGAG GAGGTGGGTT TTCCAGTCAC ACCTCA  8510 8520 8530 8540 CCATTTAAGAC CAATGACTTA GAGGTGGGTT TTCCAGTCAC ACCTCA  8560 8570 AAAAGAAAAAG ATACCTTGA TCTGTGGATC TACCACACAC AAGGCTACTT CCCTGA  8660 CAGAACTACA TACCAGGCC AGGGTTACTAC CCCTGAGACTACAC CAATGCTGCT TGTGCC  CAGAACTACA AGAGGAGGAG AAGGCTAAT TCACTCCCAA CCACAC  8610 8620 ATATCCTTGA TCTGTGGATC TACCACACAC AAGGCTACTT CCCTGA  8660 CAGAACTACA CACCAGGCCC AGGGTTCAGA TATCCACTGA CCCTGGAACTACACAC AAGGCTACTT CCCTGAGACTACACAC AAGGCTACTT CCCTGAGACTACACACACACACACACACACACACACACAC</td><td>GA CAGGGCTTGG AAAGGATTTT CCTATAAGAT GGGTGGCAAG TGGTC.  8310 8320 8330 8340 ACGAGCTGAG  8360 8370 8380 8390 8400  CCAGCAGCAG ATGGGGTGG AGCACATCT CGAGACCTGG AAAAAACATGG  8410 8420 8430 8440 8450  AGCAATCACA AGTAGCAATA CAGCAGCTAC CAATGCTGCT TGTGCCTGGC  TAGAAGCACA AGAGGAGGAG GAGGTGGGTT TTCCAGTCAC ACCTCAGGTA  8510 8520 8530 8540 8550  CCTTTAAGAC CAATGACTTA CAAGGCAGCT GTAGATCTTA GCCACATTT  8560 8570 8580 8590 8600  AAAAGAAAAG  ATATCCTTGA TCTGTGGATC TACCACACAC AAGGCTACTT CCCTGATTGG  CAGAACTACA CACCAGGGC AAGGCTAGT TACCACACAC AAGGCTACTT CCCTGATTGG  CAGAACTACA TACCACACAC TACCACACAC AAGGCCACTTTT  8660 8670 8680 8690 8690 8700  CAGAACTACA CACCAGGGC TTGAGCCCAGA TACCACACAC AAGGCCACTTAG  8710 8720 8730 8740 8750  GTGCTACAAG CACCAGGCT TTGACCCCAG TAAGGTACAAA GAGGCCAATA  8760 8770 8780 8790 8800  AAGGAGAGAA CACCAGCTTG TTACCACCAG TAAGGTACAA GAGGCCAATA  8810 8720 8730 8740 8750  GAGCCCTGAGA CACCAGCTTG TTACCACCAG TAAGGTACAAA GAGGCCAATA  8810 8720 8730 8740 8750  AAGGAGAGAA CACCAGCTTG TTACCACCAG TAAGGTACAAA GAGGCCAATA  8810 8720 8730 8740 8750  AAGGAGAGAA CACCAGCTTG TTACCACCAG TAAGGTACAAA GAGGCCAATA  8810 8720 8730 8740 8750  AAGGACAGAA CACCAGCTTG TTACCACCAG TAAGGAACAAG AACTGC;  (3) the probe corresponding to ORF-1 having the following nucleotide sequence:</td></td<>	GA         CAGGGCTTGG         AAAGGATTTT         CCTATAAGAT           8310         8320         8330         AAAGAT           8360         8370         8380         AAAGAT           CCAGCAGCAG         ATGGGGTGGG         AGCAGCATCT         CGAGAC           8410         8420         8430         AGAGCATCC         CAATGC           AGCAATCACA         AGTAGCAATA         CAGCAGCTAC         CAATGC         CAATGC         TTCCAC           TAGAAGCACA         AGAGGAGGAG         GAGGTGGGTT         TTCCAC         TTCCAC         GTAGAT           CCTTTAAGAC         CAATGACTTA         CAAGGCAGCT         GTAGAT         GTAGAT         TCCACACAC         GTAGAT         GTAGAT         TCCACACACAC         AAGGCTAAT         TCCACACACAC         AAGGCTAAT         TCACTACACACAC         AAGGCTAAT         TACCACACACAC         AAGGCTACAC         AAGGCTACACACACACACACACACACACACACACACACAC	GA         CAGGGCTTGG         AAAGGATTTT         CCTATAAGAT         GGGTGG           8310         8320         8330         8340         8340           8360         8370         8380         8390         8390           CCAGCAGCAG         ATGGGGTGGG         AGCAGCATC         CGAGACCTGG         3430         8440           AGCAATCACA         AGTAGCAATA         CAGCAGCTAC         CAATGCTGCT         CAATGCTGCT         CAATGCTGCT           TAGAAGCACA         AGGAGGAGGAG         GAGGTGGGTT         TTCCAGTCAC         CAATGCTGCT           CCTTTAAGAC         CAATGACTTA         CAAGGCAGCT         GTAGATCTTA           8510         8520         8530         8540           CCTTTAAGAC         CAATGACTTA         CAAGGGCTAAT         TCACTCCCAA           8610         8520         8630         8590           AAAAGAAAAG         GGGGGACTGG         AAGGGCTAAT         TCACTCCCAA           8660         8670         8680         AAGGCTACT           CAGAACTACA         CACCAGGGCC         AGGGCTACT         TATCCACTGA           8710         8730         8740         8740           GTGCTACAGG         CACCAGGCTT         TTAGCCCTG         TAGGCCTGCA           AAGGAGAGA<	GA CAGGGCTTGG AAAGGATTTT CCTATAAGAT GGGTGGCAAG  8310 8320 8330 8340 8340 8360 8370 8380 8380 8390 8390 CCAGCAGCAG ATGGGGTGGC AGCAGCATCT CGAGACCTGG AAAAAA  AGCAATCACA AGTAGCAATA CAGCAGCTAC CAATGCTGCT TGTGCC  TAGAAGCACA AGAGGAGGAG GAGGTGGGTT TTCCAGTCAC ACCTCA  8510 8520 8530 8540 CCATTTAAGAC CAATGACTTA GAGGTGGGTT TTCCAGTCAC ACCTCA  8560 8570 AAAAGAAAAAG ATACCTTGA TCTGTGGATC TACCACACAC AAGGCTACTT CCCTGA  8660 CAGAACTACA TACCAGGCC AGGGTTACTAC CCCTGAGACTACAC CAATGCTGCT TGTGCC  CAGAACTACA AGAGGAGGAG AAGGCTAAT TCACTCCCAA CCACAC  8610 8620 ATATCCTTGA TCTGTGGATC TACCACACAC AAGGCTACTT CCCTGA  8660 CAGAACTACA CACCAGGCCC AGGGTTCAGA TATCCACTGA CCCTGGAACTACACAC AAGGCTACTT CCCTGAGACTACACAC AAGGCTACTT CCCTGAGACTACACACACACACACACACACACACACACAC	GA CAGGGCTTGG AAAGGATTTT CCTATAAGAT GGGTGGCAAG TGGTC.  8310 8320 8330 8340 ACGAGCTGAG  8360 8370 8380 8390 8400  CCAGCAGCAG ATGGGGTGG AGCACATCT CGAGACCTGG AAAAAACATGG  8410 8420 8430 8440 8450  AGCAATCACA AGTAGCAATA CAGCAGCTAC CAATGCTGCT TGTGCCTGGC  TAGAAGCACA AGAGGAGGAG GAGGTGGGTT TTCCAGTCAC ACCTCAGGTA  8510 8520 8530 8540 8550  CCTTTAAGAC CAATGACTTA CAAGGCAGCT GTAGATCTTA GCCACATTT  8560 8570 8580 8590 8600  AAAAGAAAAG  ATATCCTTGA TCTGTGGATC TACCACACAC AAGGCTACTT CCCTGATTGG  CAGAACTACA CACCAGGGC AAGGCTAGT TACCACACAC AAGGCTACTT CCCTGATTGG  CAGAACTACA TACCACACAC TACCACACAC AAGGCCACTTTT  8660 8670 8680 8690 8690 8700  CAGAACTACA CACCAGGGC TTGAGCCCAGA TACCACACAC AAGGCCACTTAG  8710 8720 8730 8740 8750  GTGCTACAAG CACCAGGCT TTGACCCCAG TAAGGTACAAA GAGGCCAATA  8760 8770 8780 8790 8800  AAGGAGAGAA CACCAGCTTG TTACCACCAG TAAGGTACAA GAGGCCAATA  8810 8720 8730 8740 8750  GAGCCCTGAGA CACCAGCTTG TTACCACCAG TAAGGTACAAA GAGGCCAATA  8810 8720 8730 8740 8750  AAGGAGAGAA CACCAGCTTG TTACCACCAG TAAGGTACAAA GAGGCCAATA  8810 8720 8730 8740 8750  AAGGAGAGAA CACCAGCTTG TTACCACCAG TAAGGTACAAA GAGGCCAATA  8810 8720 8730 8740 8750  AAGGACAGAA CACCAGCTTG TTACCACCAG TAAGGAACAAG AACTGC;  (3) the probe corresponding to ORF-1 having the following nucleotide sequence:

AT GGAACAAGCC CCAGAAGACC AAGGGCCACA GAGGGAGCCA CACAATGAAT GGACACTAGA GCTTTTAGAG GAGCTTAAGA ATGAAGCTGT TAGACATTTT GGCTCCATGG CTTAGGGCAA CATATCTATG AAACTTATGG CCTAGGATTT

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5190 5200 5220 5230 521 AAGCCATAAT AAGAATTCTG CAACAACTGC GGATACTTGG GCAGGAGTGG 5270 5280 5240 5250 5260 TGTTTATCCA TTTCAGAATT GGGTGTCGÁC ATAGCAGAAT AGGCGTTACT 5310 TGGAGCCAGT 5290 5300 CAACAGAGGA GAGCAAGAAA AGATCC: (4) the probe corresponding to ORF-2 having the following nucleotide sequence: 5290 5300 5310 5320 5280 GCGTTACT CAACAGAGGA GAGCAAGAAA TGGAGCCAGT AGATCCTAGA 5330 5350 5360 5340 CTAGAGCCCT GGAAGCATCC AGGAAGTCAG CCTAAAACTG CTTGTACCAC 5390 5400 5410 TTGCTATTGT AAAAAGTGT/T GCTTTCATTG CCAAGTTTGT TTCACAACAA 5430 5440 5450 5460 5470 AAGCCTTAGG CATCTCCTAT GGCAGGAAGA AGCGGAGACA 5480 5490 /5|500 5510 CCTCCTCAAG GCAGTCAGAC TCATCAAGTT TCTCTATCAA AGCAG; (5) the probe/corresponding to ORF-3 having the following nucleotide sequence: 5390 5400 5410 5420 AAAGTGTT GCTTTCATTG CCAAGTTTGT TTCACAACAA AAGCCTTAGG 5450 5460 5470 GGCAGGAAGA AGCGGAGACA GCGACGAAGA 5520 5530 5490 55.00 5510 GCAGTCAGAC TCATCAAGTT TCTCTATCAA AGCAGTAAGT AGTACATGTA 5560 5570 ATGCAACCTA TACAAATAGC AATAGCAGCA TTAGTAGTAG CAATAATAAT 5590 \$600 5610

(6) the probe corresponding to ORF-4 having the following nucleotide sequence:

AGCAATAGTT GTGTGGTCCA TAGTAATCAT AGAATA;

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5520 5530 5540 5560 5570 AGTACATGTA ATGCAACCTA TACAAATAGC AATAGCAGCA TTAGTAGTAG GT 5580 5590 5600 5610 5620 CAATAATAAT AGCAATAGTT GTGTGGTCCA TAGTAATCAT AGAATATAGG 5630 5640 5650 5660 5670 AAAATATTAA GACAAAGAAA AATAGACAGG TTAATTGATA GACTAATAGA 5680 5690 5/700 5710 AAGAGCAGAA GACAGTGGCA ATGAGAÉTGA AGGAGAAATA TCAGCACTTG 5730 5740 5750 5760 5770 TGGAGATGGG GGTGGAAATG GGGCACCATG CTCCTTGGGA TATTGATGAT CTG: and (7) the probe corresponding to ORF-5 having the following nucleotide sequence:

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7980 7990 8000 8010 7970 ATCTGGGACÉ ATCTGCGGAG CCTTGTGCCT CTTCAGCTAC CACTT 8020 8030 8040 8050 8060 CACCGCTTGA GAGACTTACT CTTGATTGTA ACGAGGATTG TGGAACTTCT 8070 808ø 8090 8100 8110 GGGACGCAGG GGGTGGGAAG CCCTCAAATA TTGGTGGAAT CTCCTACAGT 8120 81/30 8140 8150 ATTGGAGTCA GGAACTAÁAG AATAGTGCTG TTAGCTTGCT CAATGCCACA 8190 8200 8170 **\$180** GCCATAGCAG TAGCTGAGGG GACAGATAGG GTTATAGAAG TAGTACAAGG 8220 8230 8240 8250 8260 AGCTTGTAGA GCTATTCGCC ACATACCTAG AAGAATAAGA CAGGGCTTGG 8270 8280 GCT/ATAAGA; and AAAGGATTTT

(b) detecting the formation of hybrids between said one or more nucleic acid probes and nucleic acid present in said biological sample.

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- 12. The method according to claim 11, wherein said probe is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.
- 13. An in vitro diagnostic method for detecting the presence or absence of nucleic acid of a human immunodeficiency virus type 1 (HIV-1) in a biological sample comprising:
- (a) contacting said biological sample with a nucleic acid probe of HIV-1 corresponding to ORF-R having the following nucleotide sequence:

8250 8260 8270 8280 8290 8300 TGGTCAAAAA CAGGGCTTGG AAAGGATTTT GCTATAAGAT GGGTGGCAAG 8310 8320 8330 8340 8350 ACTGTAAGGG AAAGAATGAG ACGAGCTGAG GTAGTGTGGT TGGATGGCC 8360 8380 8390 CCAGCAGCAG ATGGGGTGGG AGCAGCATCT/ CGAGACCTGG AAAAACATGG 8410 8420 £4430 8440 8450 AGCTAC AGCAATCACA AGTAGCAATA CAATGCTGCT TGTGCCTGGC 8460 8470 8480 8490 8500 TAGAAGCACA AGAGGAGGAG GAGGTGGGTT TTCCAGTCAC ACCTCAGGTA 8530 8540 CAAGGCAGCT CCTTTAAGAC CAATGACTTA GTAGATCTTA GCCACTTTTT 8600 8560 8570 8580 8590 AAAAGAAAAG GGGGGACTGG AAGGGCTAAT TCACTCCCAA CGAAGACAAG 8610 8620 8630 8640 ATATCCTTGA TCTGTGGATC TACCACACAC AAGGCTACTT CCCTGATTGG 8700 8660 8680 8690 CAGAACTACA CACCAGGGCC AGGGGTCAGA TATCCACTGA CCTTTGGATG 8740 8750 8710 8720 8730 GTGCTACAAG CTAGTACCAG TTGAGCCAGA TAAGGTAGAA GAGGCCAATA 8760 877/0 8780 8790 8800 AAGGAGAGAA CACCAGCTTG TTACACCCTG TGAGCCTGCA TGGAATGGAT

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8810 8820 8830 8840 8850 GACCCTGAGA GAGAAGTGTT AGAGTGGAGG TTTGACAGCC GCCTAGCATT 8860 8870 8890 8900 TCATCACGTG GCCCGAGAGC TGCATCCGGA/ GTACTTCAAG AACTGC; and

- (b) detecting the formation of hybrids between said nucleic acid probe and nucleic acid present in said biological sample.
- 14. The method according to claim 13, wherein said probe is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.
- 15. An in vitro diagnostic kit for detecting the presence or absence of nucleic acid of a human immunodeficiency virus type 1 (HIV-1) in a biological sample comprising:
- (a) a composition domprising one or more nucleic acid probes selected from the group consisting of:
- (1) the probe corresponding to ORF-Q having the following nucleotide sequence:

4480 4520 4490 4500 4510 4530 CAAGAAGAAA AGCAAAGATC ATTAGGGATT ATGGAAAACA GATGGCAGGT 4540 4560 4570 4580 GATGATTGTG TGGCAAGTAG ACAGGATGAG GATTAGAACA TGGAAAAGTT 4590 4600 4630 4610 4620 TAGTAAAACA CCATATGTAT GTTTCAGGGA AAGCTAGGGG ATGGTTTTAT 4640 4650 4660 4670 4680 ATGAAAGCCC TCATCCAAGA AAGTACACAT AGACATCACT ATAAGTTCAG 4690 4700 4710 4720 4730 CCCACTAGGG AACATATTGG GGTCTGCATA GATGCTAGAT TGGTAATAAC 4740 4750 4760 4770 4780 AGACTGGCAT CTGGGTCAGG GAGTCTCCAT AGAATGGAGG

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4790	4800	4810	4820	ACCAACTAAT
AAAAAGAGAT	ATAGCACACA	AGTAGACCCT	GAACTAGCAG	
4840	4850	4860	4870	4880
TCATCTGTAT	TACTTTGACT	GTTTTTCAGA	CTCTGCTATA	AGAAAGGCCT
4890	4900	4910	4920	4930
TATTAGGACA	TATAGTTAGC	CCTAGGTGTG	AATATCAAGC	AGGACATAAC
4940	4950	4960	4970	4980
AAGGTAGGAT	CTCTACAATA	CTTGGCACTA	GCAGCATTAA	TAACACCAAA
4990	5000	5010	5020	5030
AAAGATAAAG	CCACCTTTGC	CTAGTGTTAC	GAAACTEACA	GAGGATAGAT
5040	5050	5060	5070	
GGAACAAGCC	CCAGAAGACC	AAGGGCCACA	GAGGGAGCCA	
GGACAC;	(2) the probe	correspondi	ng to ORF-R	having the
following r	nucleotide se	quence:	/	
8250	8260	8270	8280	8290 8300
GA CAGGO	GCTTGG AAAGG	ATTT GCPAT	AAGAT GGGTG	GCAAG TGGTCAAAAA
8310 GTAGTGTGGT	8320 TGGATGGCCT	ACTGTAAGGG	AAAGAATGAG	8350 ACGAGCTGAG
8360	8370	AGCAGCATCT	8390	8400
CCAGCAGCAG	ATGGGGTGGG		CGAGACCTGG	AAAAACATGG
8410	8420	8430	8440	8450
AGCAATCACA	AGTAGCAATA	CAGCAGCTAC	CAATGCTGCT	TGTGCCTGGC
8460	8470	GAGGTGGGTT	8490	8500
TAGAAGCACA	AGAGGAGGAG		TTCCAGTCAC	ACCTCAGGTA
8510	8520	8530	8540	8550
CCTTTAAGAC	CAATGACTTA	CAAGGCAGCT	GTAGATCTTA	GCCACTTTTT
8560	8570	8580	8590	8600
AAAAGAAAAG	GGGGGAC/TGG	AAGGGCTAAT	TCACTCCCAA	CGAAGACAAG
0.510	/8620	8630	8640	8650
8610 ATATCCTTGA	TCTGTGGATC	TACCACACAC	AAGGCTACTT	CCCTGATTGG

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8710 8720 8730 8740 8750 GTGCTACAAG CTAGTACCAG TTGAGCCAGA TAAGGTAGAA GAGGCCAAATA
8760 8770 8780 8790 8800 AAGGAGAGAA CACCAGCTTG TTACACCCTG TGAGCCTGCA TGGAAAGGAT
8810 8820 8830 8840 8850 GACCCTGAGA GAGAAGTGTT AGAGTGGAGG TTTGACAGCC GCCTAGCATT
8860 8870 8890 8900 TCATCACGTG GCCCGAGAGC TGCATCCGGA GTACTTCAAG AACTGC;
(3) the probe corresponding to ORF 1 having the
following nucleotide sequence:
5030 5040 5050 5060 5070 5080 AT GGAACAAGCC CCAGAAGACC AAGGGCCACA GAGGGAGCCA CACAATGAAT
5090 51100 5120 5120 5130 GGACACTAGA GCTTTTAGAG GAGCTTAAGA ATGAAGCTGT TAGACATTTT
5140 5150 5160 5170 5180 CCTAGGATTT GGCTCATGG CTTAGGGCAA CATATCTATG AAACTTATGG
5190 5200 5220 5230 GGATACTTGG GCAGGAGTGG AAGCCATAAT AACAATTCTG CAACAACTGC
5240 5250 5260 5270 5280 TGTTTATCCA TTTCAGAATT GGGGGTGCAC ATAGCAGAAT AGGCGTTACT
5290 5300 5310 CAACAGAGAA TGGAGCCAGT AGATCC;
(4) the probe corresponding to ORF-2 having the
following nucleotide sequence:
5280 5290 5300 5310 5320 GCGTTACT CAACAGAGGA GAGCAAGAAA TGGAGCCAGT AGATCCTAGA
5330 5340 5350 5360 5370 CTAGAGCCCT GGAACCTCC AGGAAGTCAG CCTAAAACTG CTTGTACCAC
5380 5390 5400 5410 5420 TTGCTATTGT AAAAAGTGTT GCTTTCATTG CCAAGTTTGT TTCACAACAA
5430 5440 5450 5460 5470 AAGCCTTAGG CATCTCCTAT GGCAGGAAGA AGCGGAGACA GCGACGAAGA

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CCTCCTCAAG GCAGTCAGAC TCATCAAGTT TCTCTATCAA / AGCAG; (5) the probe corresponding to ORF-\$\delta\$ having the following nucleotide sequence: AAAGTGTT GCTTTCATTG CCAAGTTTGT TTCACAACAA AAGCCTTAGG CATCTCCTAT GGCAGGAAGA AGCGGAGACA GCGACGAAGA CCTCCTCAAG GCAGTCAGAC TCATCAAGTT TCTCTATCAA AGCAGTAAGT AGTACATGTA ATGCAACCTA TACAAATAGC AATAGCAGCA TTAGTAGTAG CAATAATAAT AGCAATAGTT GTGTGGTCCA TAGTAATCAT AGAATA; (6) the probe corresponding to ORF-4 having the following nucleotide sequence: 554/0 AGTACATGTA \ ATGCAACCTA TACAAATAGC AATAGCAGCA TTAGTAGTAG GT GTGTGGTCCA TAGTAATCAT AGAATATAGG CAATAATAAT AGCAATAGTT AAAATATTAA GACAAAGAAA AATAGACAGG TTAATTGATA GACTAATAGA AAGAGCAGAA GACAGTGGCA ATGAGAGTGA AGGAGAAATA TCAGCACTTG TGGAGATGGG GGTGGAAATG GGGCACCATG CTCCTTGGGA TATTGATGAT CTG;

(7) the probe corresponding to ORF-5 having the following nucleotide sequence:

7970 /7980 7990 8000 8010 CACTT ATCTGGGACG ATCTGCGGAG CCTTGTGCCT CTTCAGCTAC

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				/
8020	8030	8040	8050	8060
CACCGCTTGA	GAGACTTACT	CTTGATTGTA	ACGAGGATTG	<b>TGGAACTTCT</b>
				/
8070	8080	8090	8100	/ 8110
GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAT/	CTCCTACAGT
			/	
8120	8130	8140	8150	8160
ATTGGAGTCA	GGAACTAAAG	AATAGTGCTG	TTAGCTTCCT	CAATGCCACA
8170	8180	8190	/8200	8210
GCCATAGCAG	TAGCTGAGGG	GACAGATAGG	GTTATAGAAG	TAGTACAAGG
8220	8230	8240	/ 8250	8260
AGCTTGTAGA	GCTATTCGCC	ACATACCTAG	AAGAATAAGA	CAGGGCTTGG
			7	
8270	8280			
AAAGGATTTT	GCTATAAGA;		/	
AMAGGATITI	GCINIANGA,		/	

- (b) reagents for the detection of hybrids; and
- (c) a biological reference sample lacking nucleic acid recognized by said nucleic acid probe composition;

wherein the nucleic acid probe composition, reagents, and biological reference sample are present in an amount sufficient to perform the detection of hybrids formed between said one or more nucleic acid probes and nucleic acid present in said biological sample.

- 16. The kit according to claim 15, wherein said probe is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.
- 17. An in vitro diagnostic kit for detecting the presence or absence of nucleic acid of a human immunodeficiency virus type 1 (HIV-1) in a biological sample comprising:
- (a) a composition comprising a nucleic acid probe corresponding to ORF-R having the following nucleotide sequence:

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	8250 GA CA	8260 GGGCTTGG AA	8270 AGGATTTT GCT	8280 ATAAGAT GGGT	8290 GGCAAG TGGTC	8300 AAAAA
	83: GTAGTGTG	10 832 ET TGGATGGC	20 833 CT ACTGTAAGG	0 8340 G AAAGAATGAG	8350 ACGAGCTGAG	
	830 CCAGCAGC	00 833 AG ATGGGGTG	0 838 G AGCAGCATC	0 8390 r cgagaccyrge	8400 AAAAACATGG	
	84: AGCAATCA	10 842 CA AGTAGCAA	20 843 TA CAGCAGCTA	8440 C CAATGCTGCT	8450 TGTGCCTGGC	
	840 TAGAAGCA	50 841 CA AGAGGAGG/	70 848 AG GAGGTGGGT	8490 T TTCCAGTCAC	8500 ACCTCAGGTA	
-	85: CCTTTAAG		20 853 TA CAAGGCAGC	0 8540 F GTAGATCTTA	8550 GCCACTTTTT	
	850 AAAAGAAA	50 85: AG GGGGACT	70 858 GG AAGGGCTAA	8590 TCACTCCCAA	8600 CGAAGACAAG	
	86 ATATCCTT		20 863 TC TACCACACA	8640 AAGGCTACTT	8650 CCCTGATTGG	
	86 CAGAACTA	60 861 CA CACCAGGGG	0 868 CC AGGGGTEAG	8690 A CATCCACTGA	8700 CCTTTGGATG	
		10 872 AG CTAGTACCA	20 873 AG TIGAGCEAG	8740 TAAGGTAGAA	8750 GAGGCCAATA	
		60 871 AA CACCAGCT		8790 G TGAGCCTGCA		
	GACCCTGAG		20 AGAGTGGAG	8840 TTTGACAGCC	8850 GCCTAGCATT	
		60 881 FG GCCGAGAG	/	0 8900 A GTACTTCAAG		
١			1.2. 2.4			

- (b) reagents for the detection of hybrids; and
- (c) a biological reference sample lacking nucleic acid recognized by said nucleic acid probe composition;

wherein the nucleic acid probe composition, reagents, and biological reference sample are present in an amount sufficient

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to perform the detection of hybrids formed between said nucleic acid probe and nucleic acid present in said biological sample.

- 18. The kit according to claim 17, wherein said probe is labeled with a label selected from the group consisting of a radigactive label, an enzymatic label, and a fluorescent label.
- 19. An in vitro diagnostic method for the detection of the presence or absence of antibodies which bind to antigens of a human immunodeficiency virus type 1 (HIV-1) comprising:

(1) the peptide corresponding to ORF-Q having the

- (a) contacting a biological sample with one or more peptides selected from the group consisting of:
- following amino acid sequence:

  Cys-Gln-Glu-Lys-Gln-Arg-Ser-Leu-Gly-Ile-Met-Glu-Asn-Arg-Trp-Gln-Val-Met-Ile-Val-Trp-Gln-Val-Asp-Arg-Met-Arg-Ile-Arg-Thr-Trp-Lys-Ser-Leu-Val-Lys-His-His-Met-Tyr-Val-Ser-Gly-Lys-Ala-Arg-Gly-Trp-Phe-Tyr-Arg-His-His-Tyr-Glu-Ser-Pro-His-Pro-Arg-Ile-Ser-Ser-Glu-Val-His-Ile-Pro-Leu-Gly-Asp-Ala-Arg-Leu-Val-Ile-Thr-Thr-Val-Trp-Gly-Leu-His-Thr-Gly-Glu-Pro-Asp-Trp-His-Leu-Gly-Gln-Gly-Val-Ser-Ile-Glu-Trp-Arg-Lys-Lys-Arg-Tyr-Ser-Thr-Gln-Val-Asp-Pro-Glu-Leu-Ala-Asp-Gln-Leu-Ile-His-Leu-Tyr-Tyr-Phe-Asp-Cys-Phe-Ser-Asp-Ser-Ala-Ile-Arg-Lys-Ala-Leu-Leu-Gly-His-Ile-Val-Ser-Pro-Arg-Cys-Phe-Tyr-Gln-Ala-Gly-His-Asn-Lys-Val-Gly-Ser-Leu-Gln-Tyr-Leu-Ala-Leu-Ala-Ala-Leu-Ile-Thr-Pro-Lys-Lys-Ile-Lys-Pro-Pro-Leu-Pro-Ser-Val-Thr-Lys-Leu-Thr-Glu-Asp-Arg-Trp-Asn-Lys-Pro-Gln-Lys-Tur-Lys-

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Gly-His-Arg-Gly-Ser-His-Thr-Met-Asn-Gly-His;

(2) the peptide corresponding to ORF-R having the following amono acid sequence:

Asp-Arg-Ala-Trp-Lys-Gly-Phe-Cys-Tyr-Lys-Met-Gly-Gly-Lys-Trp-Ser-Lys-Ser-Ser-Val-Val-Gly-Trp-Pro-Thr-Val-Arg-Glu-Arg-Met-Arg-Arg-Ala-Glu-Pro-Ala-Ala-Asp-Gly-Val-Gly-Ala-Ala-Ser-Arg-Asp-Leu-Phe-Lys-His-Gly-Ala-Ile-Thr-Ser-Ser-Asn-Thr-Ala-Ala-Thr-Asn-Ala-Ala-Cys-Ala-Trp-Leu-Phe-Ala-Gln-Phe-Phe-Phe-Phe-Phe-Val-Gly-Phe-Pro-Val-Thr-Pro-Gln-Val-Pro-Leu-Arg-Pro-Met-Thr-Tyr-Lys-Ala-Ala-Val-Asp-Leu-Ser-His-Phe-Leu-Lya-Glu-Lys-Gly-Gly-Leu-Glu-Gly-Leu-Ile-His-Ser-Gln-Arg-Arg-Gln-Asp-Tle-Leu-Asp-Leu-Trp-Ile-Tyr-His-Thr-Gln-Gly-Tyr-Phe-Pro-Asp-Trp-Gln-Asn-Tyr-Thr-Pro-Gly-Pro-Gly-Val-Arg-Tyr-Pro-Leu-Thr-Phe-Gly-Trp-Cys-Tyr-Lys-Leu-Val-Pro-Val-Phe-Pro-Asp-Lys-Val-Phe-Phe-Ala-Asn-Lys-Gly-Phe-Asn-Thr-Ser-Leu-His-Pro-Val-Ser-Leu-His-Gly-Met-Asp-Asp-Pro-Glu-Arg-Glu-Val-Leu-Glu-Trp-Arg-Phe-Asp-Ser-Arg-Leu-Ala-Phe-His-His-Val-Ala-Arg-Glu-Leu-His-Pro-Glu-Tyr-Phe-Lys-Asn-Cys;

(3) the peptide corresponding to ORF-1 having the following amino acid sequence:

Met-Glu-Gln-Ala-Pro-Glu-Asp-Gln-Gly-Pro-Gln-Arg-Asp-Pro-His-Asn-Glu-Trp-Thr-Leu-Gln-Leu-Glu-Glu-Leu-Lys-Asn-Glu-Ala-Val-Arg-His-Phe-Pro-Arg-Ile-Trp-Leu-His-Gly-Leu-Gly-Gln-His-Ile-Tyr-Glu-Thr-Tyr-Gly-Asp-Thr-Trp-Ala-Gly-Val-Glu-Ala-Ile-Ile-Arg-Ile-Leu-Gln-Gln-Leu-Leu-Phe-Ile-His-Phe-Arg-Ile-Gly-Cys-Arg-His-Ser-Arg-Ile-Gly-Val-Thr-Gln-Gln-Arg-Arg-Ala-Arg-Asn-Gly-Ala-Ser-Arg-Ser;

(4) the peptide corresponding to ORF-2 having the following amino acid sequence:

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Ala-Leu-Leu-Asn-Arg-Gly-Glu-Glu-Glu-Met-Glu-Pro-Val-Asp-Pro-Arg-Leu-Glu-Pro-Trp-Lys-His-Pro-Gly-Ser-Gln-Pro-Lys-Thr-Ala-Cys-Thr-Thr-Cys-Tyr-Cys-Lys-Cys-Cys-Phe-His-Cys-Gln-Val-Cys-Phe-Thr-Thr-Lys-Ala-Leu-Gly-Ile-Ser-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Pro-Pro-Gln-Gly-Ser-Gln-Thr-His-Gln-Val-Ser-Leu-Ser-Lys-Gln:

- (5) the peptide corresponding to ORF-3 having the following amino acid sequence:
- Lys-Val-Leu-Leu-Ser-Leu-Pro-Ser-Leu-Phe-His-Asn-Lys-Ser-Leu-Arg-His-Leu-Leu-Trp-Glu-Glu-Glu-Ala-Glu-Thr-Ala-Thr-Lys-Thr-Ser-Ser-Arg-Gln-Ser-Asp-Ser-Ser-Ser-Phe-Ser-Ile-Lys-Ala-Val-Ser-Ser-Thr-Cys-Asn-Ala-Thr-Tyr-Thr-Asa-Ser-Asn-Ser-Ser-Ile-Ser-Ser-Asn-Asn-Asn-Ser-Asn-Ser-Cys-Val-Val-His-Ser-Asn-His-Arg-Ile;
- (6) the peptide corresponding to ORF-4 having the following amino acid sequence:

  Val-Val-His-Val-Met-Gln-Pro-Ile-Gln-Ile-Ala-Ile-Ala-Ala-Leu-Val-Val-Ala-Ile-Ile-Ile-Ala-Ile-Val-Val-Trp-Ser-Ile-Val-Ile-Ile-Glu-Tyr-Arg-Lys-Ile-Leu-Arg-Gln-Arg-Lys-Ile-Asp-Arg-Leu-Ile-Asp-Arg-Leu-Ile-Glu-Arg-Ala-Glu-Asp-Ser-Gly-Asn-Glu-Ser-Glu-Gly-Glu-Ile-Ser-Ala-Leu-Val-Glu-Met-Gly-Val-Glu-Met-Gly-His-His-Ala-Pro-Trp-Asp-Ile-Asp-Asp-Leu; and
  - (7) the peptide corresponding to ORF-5 having the following amino acid sequence:

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His-Leu-Ser-Gly-Thr-Ile-Cys-Gly-Ala-Leu-Cys-Leu-Phe-Ser-Tyr-His-Arg-Leu-Arg-Asp-Leu-Leu-Leu-Ile-Val-Thr-Arg-Ile-Val-Glu-Leu-Leu-Gly-Arg-Arg-Gly-Trp-Glu-Ala-Leu-Lys-Tyr-Trp-Trp-Asn-Leu-Leu-Gln-Tyr-Trp-Ser-Gln-Glu-Deu-Lys-Asn-Ser-Ala-Val-Ser-Leu-Leu-Asn-Ala-Thr-Ala-Ile-Ala-Val-Ala-Gly-Gly-Thr-Asp-Arg-Val-Ile-Glu-Val-Val-Gln-Gly-Ala-Cys-Arg-Ala-Ile-Arg-His-Ile-Pro-Arg-Arg-Ile-Arg-Gln-Gly-Leu-Glu-Arg-Ile-Leu-Leu-; and

- (b) detecting the formation of antigen-antibody complex between said one or more peptides and antibodies present in said biological sample.
- 20. The method of claim 19, wherein said peptide is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.
- 21. An in vitro diagnostic method for the detection of the presence or absence of antibodies which bind to antigens of a human immunodeficiency varus type 1 (HIV-1) comprising:
- (a) contacting a viological sample with a peptide corresponding to ORF-1 having the following amino acid sequence:

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Asp-Arg-Ala-Trp-Lys-Gly-Phe-Cys-Tyr-Lys-Wet-Gly-Gly-Lys-Trp-Ser-Lys-Ser-Ser-Val-Val-Gly-Trp-Pro-Thr-Val-Arg-Glu-Arg-Met-Arg-Arg-Ala-Glu-Pro-Ala-Ala-Asp-Gly-Val-Gly-Ala-Ala-Ser-Arg-Asp-Leu-Phe-Lys-His-Gly-Ala-Ile-Thr-Ser-Ser-Asn-Thr-Ala-Ala-Thr-Asn-Ala-Ala-Cys-Ala-Trp-Leu-Phe-Ala-Gln-Phe-Phe-Phe-Phe-Val-Gly-Phe-Pro-Val-Thr-Pro-Gln-Val-Pro-Leu-Arg-Pro-Met-Thr-Tyr-Lys-Ala-Ala-Val-Asp-Leu-Ser-His-Phe-Leu-Lys-Glu-Lys-Gly-Gly-Leu-Glu-Gly-Leu-Ile-His-Ser-Gln-Arg-Arg-Gln-Asp-Ile-Leu-Asp-Leu-Trp-Ile-Tyr-His-Thr-Gln-Gly-Tyr-Phe-Pro-Asp-Trp-Gln-Asn-Tyr-Thr-Pro-Gly-Pro-Gly-Val-Arg-Tyr-Pro-Leu-Thr-Phe-Gly-Trp-Cys-Tyr-Lys-Leu-Val-Pro-Val-Phe-Pro-Asp-Lys-Val-Phe-Phe-Ala-Asn-Lys-Gly-Phe-Asn-Thr-Ser-Leu-Leu-His-Pro-Val-Ser-Leu-His-Gly-Met-Asp-Asp-Pro-Glu-Arg-Glu-Val-Leu-Glu-Trp-Arg-Phe-Asp-Ser-Arg-Leu-Ala-Phe-His-His-Val-Ala-Arg-Glu-Leu-His-Pro-Glu-Tyr-Phe-Lys-Asn-Cys; and

- (b) detecting the formation of antigen-antibody complex between said peptide and antibodies present in said biological sample.
- 22. The method of laim 21, wherein said peptide is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.

23. A diagnostic kit for the *in vitro* detection of the presence or absence of antibodies which bind to antigens of a human immunodeficiency virus type 1 (HIV-1) comprising:

(a) a peptide composition comprising one or more peptides selected from the group consisting of:

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10 /V 10 /V following amino acid sequence:

Cys-Gln-Glu-Glu-Lys-Gln-Arg-Ser-Leu-Gly-Ile-Met-Glu-Asn-Arg-TrpGln-Val-Met-Ile-Val-Trp-Gln-Val-Asp-Arg-Met-Arg-Ile-Arg-Thr-TrpLys-Ser-Leu-Val-Lys-His-His-Met-Tyr-Val-Ser-Gly-Lys-Ala-Arg-GlyTrp-Phe-Tyr-Arg-His-His-Tyr-Glu-Ser-Pro-His-Pro-Arg-Ile-Ser-SerGlu-Val-His-Ile-Pro-Leu-Gly-Asp-Ala-Arg-Leu-Val-Ile-Thr-Thr-ValTrp-Gly-Leu-His-Thr-Gly-Glu-Pro-Asp-Trp-His-Leu-Gly-Gln-Gly-ValSer-Ile-Glu-Trp-Arg-Lys-Lys-Arg-Ty-Ser-Thr-Gln-Val-Asp-Pro-GluLeu-Ala-Asp-Gln-Leu-Ile-His-Leu-Tyr-Tyr-Phe-Asp-Cys-Phe-Ser-AspSer-Ala-Ile-Arg-Lys-Ala-Leu-Lyu-Gly-His-Ile-Val-Ser-Pro-Arg-Cys-

Phe-Tyr-Gln-Ala-Gly-His-Asn-Lys-Val-Gly-Ser-Leu-Gln-Tyr-Leu-Ala-Leu-Ala-Ala-Leu-Ile-Thr-Pro-Lys-Lys-Lle-Lys-Pro-Pro-Leu-Pro-Ser-Val-Thr-Lys-Leu-Thr-Glu-Asp-Arg-Trp-Asn-Lys-Pro-Gln-Lys-Thr-Lys-

(1) the peptide corresponding to ORF-Q having the

(2) the peptide corresponding to ORF-R having the following amino acid sequence:

Gly-His-Arg-Gly-Ser-His-Thr-Met-Asn-Gly-His;

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Asp-Arg-Ala-Trp\Lys-Gly-Phe-Cys-Tyr-Lys-Met-Gly-Gly-Lys-Trp-Ser-Lys-Ser-Ser-Val-Val-Gly-Trp-Pro-Thr-Val-Arg-Glu-Arg-Met-Arg-Arg-Ala-Glu-Pro-Ala-Ala-Asp-Gly-Val-Gly-Ala-Ala-Ser-Arg-Asp-Leu-Phe-Lys-His-Gly-Ala-Ile-Thr-Ser-Ser-Asn-Thr-Ala-Ala-Thr-Asn-Ala-Ala-Cys-Ala-Trp-Leu-Phe-Ala-Gln-Phe-Phe-Phe-Phe-Val-Gly-Phe-Pro-Val-Thr-Pro-Gln-Val-Pro-Leu-Arg-Pro-Met-Thr-Tyr-Lys-Ala-Ala-Val-Asp-Leu-Ser-His-Phe-Leu-Lys-Glu-Lys-Gly-Gly-Leu-Glu-Gly-Leu-Ile-His-Ser-Gln-Arg-Arg-Gln-Asp-Ale-Leu-Asp-Leu-Trp-Ile-Tyr-His-Thr-Gln-Gly-Tyr-Phe-Pro-Asp-Trp-Cln-Asn-Tyr-Thr-Pro-Gly-Pro-Gly-Val-Arg-Tyr-Pro-Leu-Thr-Phe-Gly-Trp/Cys-Tyr-Lys-Leu-Val-Pro-Val-Phe-Pro-Asp-Lys-Val-Phe-Phe-Ala-Ash-Lys-Gly-Phe-Asn-Thr-Ser-Leu-Leu-His-Pro-Val-Ser-Leu-His-Gly-Met-Asp-Asp-Pro-Glu-Arg-Glu-Val-Leu-Glu-Trp-Arg-Phe-Asp-Ser-Arg-Leu-Ala-Phe-His-His-Val-Ala-Arg-Glu-Leu-His-Pro-Glu-Tyr-Phe-Lys-Asn-Cys;

(3) the peptide corresponding to ORF-1 having the following amino acid sequence:

Met-Glu-Gln-Ala-Pro-Glu-Asp-Gln-Gly-Pro-Gln-Arg-Asp-Pro-His-Asn-Glu-Trp-Thr-Leu-Gln-Leu-Leu-Glu-Glu-Leu-Lys-Asn-Glu-Ala-Val-Arg-His-Phe-Pro-Arg-Ile-Trp-Leu-His-Gly-Leu-Gly-Gln-His-Ile-Tyr-Glu-Thr-Tyr-Gly-Asp-Thr-Trp-Ala-Gly-Val-Glu-Ala-Ile-Ile-Arg-Ile-Leu-Gln-Gln-Leu-Leu-Phe-Ile-His-Phe-Arg-Ile-Gly-Cys-Arg-His-Ser-Arg-Ile-Gly-Val-Thr-Gln-Gln-Arg-Arg-Ala-Arg-Asn-Gly-Ala-Ser-Arg-Ser;

(4) the peptide corresponding to ORF-2 having the following amino acid sequence:

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Ala-Leu-Leu-Asa-Arg-Gly-Glu-Glu-Met-Glu-Pro-Val-Asp-Pro-Arg-Leu-Glu-Pro-Trp-Lys-His-Pro-Gly-Ser-Gln-Pro-Lys-Thr-Ala-Cys-Thr-Thr-Cys-Tyr-Cys-Lys-Cys-Cys-Phe-His-Cys-Gln-Val-Cys-Phe-Thr-Thr-Lys-Ala-Leu-Gly-Ile-Ser-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Pro-Pro-Glh-Gly-Ser-Gln-Thr-His-Gln-Val-Ser-Leu-Ser-Lys-Gln:

(5) the peptide corresponding to ORF-3 having the following amino acid sequence:

Lys-Val-Leu-Leu-Ser-Leu-Fro-Ser-Leu-Phe-His-Asn-Lys-Ser-Leu-ArgHis-Leu-Leu-Trp-Gln-Glu-Glu-Ala-Glu-Thr-Ala-Thr-Lys-Thr-Ser-Ser-

Arg-Gln-Ser-Asp-Ser-Ser-Ser-Phe-Ser-Ile-Lys-Ala-Val-Ser-Ser-Thr-Cys-Asn-Ala-Thr-Tyr-Thr-Asp-Ser-Asn-Ser-Ser-Ile-Ser-Ser-Asn-Asn-Asn-Ser-Asn-Ser-Cys-Val-Val-His-Ser-Asn-His-Arg-Ile;

(6) the peptide dorresponding to ORF-4 having the following amino acid sequence:

Val-Val-His-Val-Met-Gln-Pro-ile-Gln-Ile-Ala-Ile-Ala-Ala-Leu-Val-Val-Ala-Ile-Ile-Ile-Ala-Ile-Val-Val-Trp-Ser-Ile-Val-Ile-Ile-Glu-Tyr-Arg-Lys-Ile-Leu-Arg-Gln-Arg-Lys-Ile-Asp-Arg-Leu-Ile-Asp-Arg-Leu-Ile-Glu-Asp-Ser-Gly-Asn-Glu-Ser-Glu-Gly-Glu-Ile-Ser-Ala-Leu-Val-Glu-Met-Gly-Val-Glu-Met-Gly-His-His-Ala-Pro-Trp-Asp-Ile-Asp-Asp-Leu;

(7) the peptide corresponding to ORF-5 having the following amino acid sequence:

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Con Port His-Leu-Ser-Gly-Thr-Ile-Cys-Gly-Ala-Leu-Cys-Leu-Phe-Ser-Tyr-His-Arg-Deu-Arg-Asp-Leu-Leu-Leu-Ile-Val-Thr-Arg-Ile-Val-Glu-Leu-Leu-Gly-Arg-Arg-Gly-Trp-Glu-Ala-Leu-Lys-Tyr-Trp-Trp-Asn-Leu-Leu-Gln-Tyr-Trp-Ser-Gln-Glu-Leu-Lys-Asn-Ser-Ala-Val-Ser-Leu-Leu-Asn-Ala-Thr-Ala-Ile-Ala-Val-Ala-Glu-Gly-Thr-Asp-Arg-Val-Ile-Glu-Val-Val-Gly-Ala-Cys-Arg-Ala-Ile-Arg-His-Ile-Pro-Arg-Arg-Ile-Arg-Gln-Gly-Leu-Glu-Arg-Ile-Leu-Leu-;

- (b) reagents for the detection of the formation of antigenantibody complex; and
  - (c) a biological reference sample lacking antibodies recognized by said peptide composition

wherein the peptide composition, reagents, and biological reference sample are present in an amount sufficient to perform the detection of antigen-antibody complex formed between said one or more peptides and antibodies present in said biological sample.

24. The kit of claim 23, wherein said peptide is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.

25. A diagnostic kit for the in vitro detection of the presence or absence of antibodies which bind to antigens of a human immunodeficiency virus type 1 (HIV-1) comprising:

(a) a peptide composition comprising a peptidecorresponding to ORF-R having the following amino acid sequence:

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Asp-Arg-Ala-Trp-Lys-Gly-Phe-Cys-Tyr-Lys-Met-Gly-Gly-Lys-Trp-Ser-Lys-Ser-Ser-Val-Val-Gly-Trp-Pro-Thy-Val-Arg-Glu-Arg-Met-Arg-Arg-Ala-Glu-Pro-Ala-Ala-Asp-Gly-Val-Cly-Ala-Ala-Ser-Arg-Asp-Leu-Phe-Lys-His-Gly-Ala-Ile-Thr-Ser-Ser-Asn-Thr-Ala-Ala-Thr-Asn-Ala-Ala-Cys-Ala-Trp-Leu-Phe-Ala-Gln-Phe-Phe-Phe-Phe-Val-Gly-Phe-Pro-Val-Thr-Pro-Gln-Val-Pro-Leu-Arg-Hro-Met-Thr-Tyr-Lys-Ala-Ala-Val-Asp-Leu-Ser-His-Phe-Leu-Lys-Glu-Lys-Gly-Gly-Leu-Glu-Gly-Leu-Ile-His-Ser-Gln-Arg-Arg-Gln-Asp-Ile-Leu-Asp-Leu-Trp-Ile-Tyr-His-Thr-Gln-Gly-Tyr-Phe-Pro-Asp-Txp-Gan-Asn-Tyr-Thr-Pro-Gly-Pro-Gly-Val-Arg-Tyr-Pro-Leu-Thr-Phe-Gly-Trp-Cys-Tyr-Lys-Leu-Val-Pro-Val-Phe-Pro-Asp-Lys-Val-Phe-Phe-Ala-Asn-Lys-Gly-Phe-Asn-Thr-Ser-Leu-Leu-His-Pro-Val-Ser-Leu-His-Gly-Met-Asp-Asp-Pro-Glu-Arg-Glu-Val-Leu-Glu-Trp-Arg-Phe-Asp-Ser-Arg-Leu-Ala-Phe-His-His-Val-Ala-Arg-Glu-Leu-His-Pro-Glu-Tyr-Phe-Lys-Asn-Cys;

- (b) reagents for the detection of the formation of antigenantibody complex;
- (c) a biological reference sample lacking antibodies recognized by said peptide composition,

wherein the peptide composition, reagents, and biological reference sample are present in an amount sufficient to perform the detection of antigen-antibody complex formed between said peptide and antibodies present in said biological sample.

26. The kit of claim 25, wherein said peptide is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.

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- 27. An in vitro diagnostic method for the detection of the presence or absence of antigens which bind to antibodies of a human immunodeficiency virus type 1 (HIV-1) comprising:
- (a) contacting a biological sample with one or more antibodies selected from the group consisting of:
- (1) an antibody against a peptide corresponding to ORF-Q having the following amino acid sequence: Cys-Gln-Glu-Glu-Lys-Gln-Arg-Ser-Leu-Gly-Ile-Met-Glu-Asn-Arg-Trp-Gln-Val-Met-Ile-Val-Trp-Gln-Val-Asp-Arg-Met-Arg-Ile-Arg-Thr-Trp-Lys-Ser-Leu-Val-Lys-His-His-Met-Tyr-Val-Ser-Gly-Lys-Ala-Arg-Gly-Trp-Phe-Tyr-Arg-His-His-Tyr-Glu-Ser-Pro-His-Pro-Arg-Ile-Ser-Ser-Glu-Val-His-Ile-Pro-Leu-Gly-Asp-Ala-Arg-Leu-Val-Ile-Thr-Thr-Val-Trp-Gly-Leu-His-Thr-Gly-Glu-Pro-Asp-Trp-His-Leu-Gly-Gln-Gly-Val-Ser-Ile-Glu-Trp-Arg-Lys-Lys-Arg-Tyr-Ser-Thr-Gln-Val-Asp-Pro-Glu-Leu-Ala-Asp-Gln-Leu-Ile-His-Leu-Tyr-Tyr-Phe-Asp-Cys-Phe-Ser-Asp-Ser-Ala-Ile-Arg-Lys-Ala-Leu-Gly-His-Ile-Val-Ser-Pro-Arg-Cys-Phe-Tyr-Gln-Ala-Gly-His-Asn-Lys-Val-Gly-Ser-Leu-Gln-Tyr-Leu-Ala-Leu-Ala-Ala-Leu-Ile-Thr-Pro-Lys-Lys-Ile-Lys-Pro-Pro-Leu-Pro-Ser-Val-Thr-Lys-Leu-Thr-Glu-Asp-Arg-Trp-Asn-Lys-Pro-Gln-Lys-Thr-Lys-Gly-His-Arg-Gly-Ser-His-Thr-Met-Asn-Gly-His
- (2) an antibody against a peptide corresponding to ORF-R having the following amino acid sequence:

Gen By Can Asp-Arg-Ala-Trp-Lys-Gly-Phe-Cys-Tyr-Lys-Met-Gly-Gly-Lys-Trp-Ser-Lys-Ser-Sex-Val-Val-Gly-Trp-Pro-Thr-Val-Arg-Glu-Arg-Met-Arg-Arg-Ala-Glu-Pro-Ala-Ala-Asp-Gly-Val-Gly-Ala-Ala-Ser-Arg-Asp-Leu-Phe-Lys-His-Gly-Ala-Ile-Thr-Ser-Ser-Asn-Thr-Ala-Ala-Thr-Asn-Ala-Ala-Cys-Ala-Trp-Leu-Phe-Ala-Gln-Phe-Phe-Phe-Phe-Phe-Val-Gly-Phe-Pro-Val-Thr-Pro-Gln-Val-Pro-Leu-Arg-Pro-Met-Thr-Tyr-Lys-Ala-Ala-Val-Asp-Leu-Ser-His-Phe-Leu-Lys-Glu-Lys-Gly-Gly-Leu-Glu-Gly-Leu-Ile-His-Ser-Gln-Arg-Arg-Gln-Asp-Ile-Leu-Asp-Leu-Trp-Ile-Tyr-His-Thr-Gln-Gly-Tyr-Phe-Pro-Asp-Trp-Cys-Tyr-Lys-Leu-Val-Pro-Gly-Val-Arg-Tyr-Pro-Leu-Thr-Phe-Gly-Trp-Lys-Tyr-Lys-Leu-Val-Pro-Val-Phe-Pro-Asp-Lys-Val-Phe-Phe-Ala-Asn-Lys-Gly-Phe-Asn-Thr-Ser-Leu-Leu-His-Pro-Val-Ser-Leu-His-Gly-Met-Asp-Asp-Pro-Glu-Arg-Glu-Val-Leu-Glu-Trp-Arg-Phe-Asp-Ser-Arg-Iuu-Ala-Phe-His-His-Val-Ala-Arg-Glu-Leu-His-Pro-Glu-Tyr-Phe-Lys-Ash-Cys;

(3) an antibody against a peptide corresponding to ORF-1 having the following amino acid sequence:

Met-Glu-Gln-Ala-Pro-Glu-Asp-Gln-Gly-Pro-Gln-Arg-Asp-Pro-His-Asn-Glu-Trp-Thr-Leu-Gln-Leu-Glu-Glu-Leu-Lys-Asn-Glu-Ala-Val-Arg-His-Phe-Pro-Arg-Ile-Trp-Leu-His-Gly-Leu-Gly-Gln-His-Ile-Tyr-Glu-Thr-Tyr-Gly-Asp-Thr-Trp-Ala-Gly-Val-Glu-Ala-Ile-Ile-Arg-Ile-Leu-Gln-Gln-Leu-Leu-Phe-Ile-His-Phe-Arg-Ile-Gly-Cys-Arg-His-Ser-Arg-Ile-Gly-Val-Thr-Gln-Gln-Arg-Arg-Ala-Arg-Asn-Gly-Ala-Ser-Arg-Ser;

(4) an antibody against a peptide corresponding to ORF-2 having the following amino acid sequence:

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Ala-Leu-Leu-Asn-Arg-Gly-Glu-Gln-Glu-Met-Glu-Pro-Val-Asp-Pro-Arg-Leu-Glu-Pro-Trp-Lys-His-Pro-Gly-Ser-Gln-Pro-Lys-Thr-Ala-Cys-Thr-Thr-Cys-Tyr-Cys-Lys-Lys-Cys-Phe-His-Cys-Gln-Val-Cys-Phe-Thr-Thr-Lys-Ala-Leu-Gly-Ile-Ser-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Pro-Pro-Gln-Gly-Ser-Gln-Thr-Vis-Gln-Val-Ser-Leu-Ser-Lys-Gln:

(5) an antibody against a peptide corresponding to ORF-3 having the following amino acid sequence:

Lys-Val-Leu-Leu-Ser-Leu-Pro-Ser-Leu-Phe-His-Asn-Lys-Ser-Leu-ArgHis-Leu-Leu-Trp-Gln-Glu-Glu-Ala-Glu-Thr-Ala-Thr-Lys-Thr-Ser-SerArg-Gln-Ser-Asp-Ser-Ser-Ser-Phe-Ser-Ile-Lys-Ala-Val-Ser-Ser-ThrCys-Asn-Ala-Thr-Tyr-Thr-Asn-Ser-Asn-Ser-Ser-Ile-Ser-Ser-Ser-AsnAsn-Asn-Ser-Asn-Ser-Cys Val-Val-His-Ser-Asn-His-Arg-Ile;

(6) an antibody against a peptide corresponding to ORF-4 having the following amino acid sequence:

Val-Val-His-Val-Met/Gln-Pro-Ile-Gln-Ile-Ala-Ile-Ala-Ala-Leu-Val-Val-Ala-Ile-Ile-Ile-Ala-Ile-Val-Val-Trp-Ser-Ile-Val-Ile-Ile-Glu-Tyr-Arg-Lys-Ile-Leu-Arg-Gln-Arg-Lys-Ile-Asp-Arg-Leu-Ile-Asp-Arg-Leu-Ile-Glu-Arg-Ala-Gly-Asp-Ser-Gly-Asn-Glu-Ser-Glu-Gly-Glu-Ile-Ser-Ala-Leu-Val-Glu-Met-Gly-Val-Glu-Met-Gly-His-His-Ala-Pro-Trp-Asp-Ile-Asp-Asp-Leu; and

(7) an antibody against a peptide corresponding to ORF-5 having the following amino acid sequence:

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Hig-Leu-Ser-Gly-Thr-Ile-Cys-Gly-Ala-Leu-Cys-Leu-Phe-Ser-Tyr-His-Arg-Leu-Arg-Asp-Leu-Leu-Leu-Ile-Val-Thr-Arg-Ile-Val-Glu-Leu-Leu-Gly-Arg-Arg-Gly-Trp-Glu-Ala-Leu-Lys-Tyr-Trp-Trp-Asn-Leu-Leu-Gln-Tyr-Trp-Ser-Gln-Glu-Deu-Lys-Asn-Ser-Ala-Val-Ser-Leu-Leu-Asn-Ala-Thr-Ala-Ile-Ala-Val-Ala-Glu-Gly-Thr-Asp-Arg-Val-Ile-Glu-Val-Val-Gln-Gly-Ala-Cys-Arg-Ala-Ile-Arg-His-Ile-Pro-Arg-Arg-Ile-Arg-Gln-Gly-Leu-Glu-Arg-Ile-Leu-Leu-; and

- (b) detecting the formation of antigen-antibody complex between said one or more antibodies and antigens present in said biological sample.
- 28. The method of claim 77, wherein said antibody is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.
- 29. An in vitro diagnostic method for the detection of the presence or absence of antigens which bind to antibodies of a human immunodeficiency virus type 1 (HIV-1) comprising:
- (a) contacting a biological sample with an antibody against a peptide corresponding to ORF-R having the following amino acid sequence:

FINNEGAN, HENDERSON FARABOW, GARRETT & DUNNER 1300 I STREET, N. W. WASHINGTON, DC 20005 11-202-408-4000 (5)

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Asp-Arg-Ala-Trp-Lys-Gly-Phe-Cys-Tyr-Lys-Met-Gly-Gly-Lys-Trp-Ser-Lys-Ser-Ser-Val-Val-Gly-Trp-Pro-Thr-Val-Arg-Glu-Arg-Met-Arg-Arg-Ala-Glu-Pro-Ala-Ala-Asp-Gly-Val-Gly-Ala-Ala-Ser-Arg-Asp-Leu-Phe-Lys-His-Gly-Ala-Ile-Thr-Ser-Ser-Asn-Thr-Ala-Ala-Thr-Asn-Ala-Ala-Cys-Ala-Trp-Leu-Phe-Ala-Gln-Phe-Phe-Phe-Phe-Val-Gly-Phe-Pro-Val-Thr-Pro-Gln-Val-Pro-Leu-Arg-Pro-Met-Thr-Tyr-Lys-Ala-Ala-Val-Asp-Leu-Ser-His-Phe-Leu-Lys-Glu-Lys-Gly-Leu-Glu-Gly-Leu-Ile-His-Ser-Gln-Arg-Arg-Gln-Asp-Ile-Leu-Asp-Leu-Trp-Ile-Tyr-His-Thr-Gln-Gly-Tyr-Phe-Pro-Asp-Trp-Gln-Ash-Tyr-Thr-Pro-Gly-Pro-Gly-Val-Arg-Tyr-Pro-Leu-Thr-Phe-Gly-Trp-ys-Tyr-Lys-Leu-Val-Pro-Val-Phe-Pro-Asp-Lys-Val-Phe-Phe-Ala-Asn-Lys-Gly-Phe-Asn-Thr-Ser-Leu-Leu-His-Pro-Val-Ser-Leu-His-Gly-Met-Asp-Asp-Pro-Glu-Arg-Glu-Val-Leu-Glu-Trp-Arg-Phe-Asp-Ser-Arg-Leu-Ala-Phe-His-His-Val-Ala-Arg-Glu-Leu-His-Pro-Glu-Tyr-Phe-Lys-Asn-Cys; and

- (b) detecting the formation of antigen-antibody complex between said antibody and antigens present in said biological sample.
- 30. The method of claim 79, wherein said antibody is labeled with a label selected from the group consisting of a radioactive label, an exzymatic label, and a fluorescent label.
- 31. A diagnostic kit for the *in vitro* detection of the presence or absence of antigens which bind to antibodies of a human immunodeficiency virus type 1 (HIV-1) comprising:
- (a) an antibody composition comprising one or more antibodies selected from the group consisting of:

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(A) an antibody against a peptide corresponding to ORF-Q having the following amino acid sequence:

Cys-Gln-Glu-Glu-Lys-Gln-Arg-Ser-Leu-Gly-Ile-Met-Glu-Asn-Arg-Trp-Gln-Val-Met-Ile-Val-Trp-Gln-Val-Asp-Arg-Met-Arg-Ile-Arg-Thr-Trp-Lys-Ser-Leu-Val-Lys-His-His-Met-Tyr-Val-Ser-Gly-Lys-Ala-Arg-Gly-Trp-Phe-Tyr-Arg-His-His-Tyr-Glu-Ser-Pro-His-Pro-Arg-Ile-Ser-Ser-Glu-Val-His-Ile-Pro-Leu-Gly-Asp-Ala-Arg-Leu-Val-Ile-Thr-Thr-Val-Trp-Gly-Leu-His-Thr-Gly-Glu-Pro-Asp-Trp-His-Leu-Gly-Gln-Gly-Val-Ser-Ile-Glu-Trp-Arg-Lys-Lys-Arg-Tyr-Ser-Thr-Gln-Val-Asp-Pro-Glu-Leu-Ala-Asp-Gln-Leu-Ile-His-Leu-Tyr-Tyr-Phe-Asp-Cys-Phe-Ser-Asp-Ser-Ala-Ile-Arg-Lys-Ala-Leu-Leu-Gly-His-Ile-Val-Ser-Pro-Arg-Cys-Phe-Tyr-Gln-Ala-Gly-His-Asn-Lys-Val-Gly-Ser-Leu-Gln-Tyr-Leu-Ala-Leu-Ala-Ala-Leu-Ile-Thr-Pro-Lys-Lys-Ile-Lys-Pro-Pro-Leu-Pro-Ser-Val-Thr-Lys-Leu-Thr-Glu-Asp-Arg-Trp-Asn-Lys-Pro-Gln-Lys-Thr-Lys-

(2) an antibody against a peptide corresponding to ORF-R having the following amino acid sequence:

Gly-His-Arg-Gly-Ser-His-Thr-Met-Asn-Gly-His

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(3) an antibody against a peptide corresponding to ORF-1 having the following amino acid sequence:

Met-Glu-Gln-Ala-Pro-Glu-Asp-Gln-Gly-Pro-Gln-Arg-Asp-Pro-His-Asn-Glu-Trp-Thr-Leu-Gln-Leu-Glu-Glu-Leu-Lys-Asn-Glu-Ala-Val-Arg-His-Phe-Pro-Arg-Ile-Trp-Leu-His-Gly-Leu-Gly-Gln-His-Ile-Tyr-Glu-Thr-Tyr-Gly-Asp-Thr-Trp-Ala-Gly-Val-Glu-Ala-Ile-Ile-Arg-Ile-Leu-Gln-Gln-Leu-Leu-Phe-Ile-His-Phe-Arg-Ile-Gly-Cys-Arg-His-Ser-Arg-Ile-Gly-Val-Thr-Gln-Gln-Arg-Arg-Ala-Arg-Asn-Gly-Ala-Ser-Arg-Ser;

(4) an antibody against a peptide corresponding to ORF-2 having the following amino acid sequence:

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S JX Ala-Leu-Leu-Asn-Arg-Gly-Glu-Gln-Glu-Met-Glu-Pro-Val-Asp-Pro-Arg-Leu-Glu-Pro-Trp-Lys-His-Pro-Gly-Ser-Gln-Pro-Lys-Thr-Ala-Cys-Thr-Thr-Cys-Tyr-Cys-Lys-Cys-Cys-Phe-His-Cys-Gln-Val-Cys-Phe-Thr-Thr-Lys-Ala-Leu-Gly-Ile-Ser-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Pro-Pro-Gln-Gly-Ser-Gln-Thr-His-Gln-Val-Ser-Leu-Ser-Lys-Gln;

- (5) an antibody against a peptide corresponding to ORF-3 having the following amino acid sequence:

  Lys-Val-Leu-Leu-Ser-Leu-Pro-Ser-Leu-Phe-His-Asn-Lys-Ser-Leu-Arg-His-Leu-Leu-Trp-Gln-Glu-Glu-Ala-Glu-Thr-Ala-Thr-Lys-Thr-Ser-Ser-Arg-Gln-Ser-Asp-Ser-Ser-Ser-Phe-Ser-Ile-Lys-Ala-Val-Ser-Ser-Thr-Cys-Asn-Ala-Thr-Tyr-Thr-Asn-Sev-Asn-Ser-Ser-Ile-Ser-Ser-Asn-Asn-Asn-Ser-Asn-Ser-Cys-Val-Val-His-Ser-Asn-His-Arg-Ile;
- (6) an antibody against a peptide corresponding to ORF-4 having the following amino acid sequence: Val-Val-His-Val-Met-Gln-Pro-Ile-Gln-Ile-Ala-Ile-Ala-Ala-Leu-Val-Val-Ala-Ile-Ile-Ile-Ala-Ile-Val-Val-Trp-Ser-Ile-Val-Ile-Ile-Glu-Tyr-Arg-Lys-Ile-Leu-Arg-Gln-Arg-Lys-Ile-Asp-Arg-Leu-Ile-Glu-Arg-Ala-Glu-Asp-Ser-Gly-Asn-Glu-Ser-Glu-Gly-Glu-Ile-Ser-Ala-Leu-Val-Glu-Met-Gly-Val-Glu-Met-Gly-His-His-Ala-Pro-Trp-Asp-Ile-Asp-Asp-Leu; and
- (7) an antibody against a peptide corresponding to ORF-5 having the following amino acid sequence:

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HNs-Leu-Ser-Gly-Thr-Ile-Cys-Gly-Ala-Leu-Cys-Leu-Phe-Ser-Tyr-His-Arg-Leu-Arg-Asp-Leu-Leu-Leu-Ile-Val-Thr-Arg-Ile-Val-Glu-Leu-Leu-Gly-Arg-Arg-Gly-Trp-Glu-Ala-Leu-Lys-Tyr-Trp-Trp-Asn-Leu-Leu-Gln-Tyr-Trp-Ser-Gln-Glu-Leu-Lys-Asn-Ser-Ala-Val-Ser-Leu-Leu-Asn-Ala-Thr-Ala-Ile-Ala-Val-Ala-Glu-Gly-Thr-Asp-Arg-Val-Ile-Glu-Val-Val-Gln-Gly-Ala-Cys-Arg-Ala-Ile-Arg-Hia-Ile-Pro-Arg-Arg-Ile-Arg-Gln-Gly-Leu-Glu-Arg-Ile-Leu-Deu-;

- (b) reagents for the detection of the formation of antigenantibody complex; and
- (c) a biological reference sample lacking antigens recognized by said antibody composition,

wherein the antibody composition, reagents, and biological reference sample are present in an amount sufficient to perform the detection of antigen-antibody complex formed between said one or more antibodies and antigens present in said biological sample.

32. The kit of claim 31, wherein said antibody is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.

33. A diagnostic kit for the in vitro detection of the presence or absence of antigens which bind to antibodies of a human immunodeficiency virus type 1 (HIV-1) comprising:

(a) an antibody composition comprising an antibody against a peptide corresponding to ORF-R having the following amino acid sequence:

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Asp-Arg-Ala-Trp-Lys-Gly-Phe-Cys-Tyr-Lys-Met-Gly-Gly-Lys-Trp-Ser-Lys-Ser-Ser-Val-Val-Gly-Trp-Pro-Thr-Val-Arg-Glu-Arg-Met-Arg-Arg-Ala-Glu-Pro-Ala-Ala-Asp-Gly-Val-Gly-Ala-Ala-Ser-Arg-Asp-Leu-Phe-Lys-His-Gly-Ala-Ile-Thr-Ser-Ser-Asn-Thr-Ala-Ala-Thr-Asn-Ala-Ala-Cys-Ala-Trp-Leu-Phe-Ala-Gln-Phe-Phe-Phe-Phe-Val-Gly-Phe-Pro-Val-Thr-Pro-Gln-Val-Pro-Leu-Arg-Pro-Met-Thr-Tyr-Lys-Ala-Ala-Val-Asp-Leu-Ser-His-Phe-Leu-Lys-Glu-Lys-Gly-Gly-Leu-Glu-Gly-Leu-Ile-His-Ser-Gln-Arg-Arg-Gln-Asp-Ile-Leu-Asp-Leu-Trp-Ile-Tyr-His-Thr-Gln-Gly-Tyr-Phe-Pro-Asp-Trp-Gln-Asn-Tyr-Thr-Pro-Gly-Pro-Gly-Val-Arg-Tyr-Pro-Leu-Thr-Phe-Gly-Trp-Cys-Tyr-Lys-Leu-Val-Pro-Val-Phe-Pro-Asp-Lys-Val-Phe-Phe-Ala-Ass-Lys-Gly-Phe-Asn-Thr-Ser-Leu-Leu-His-Pro-Val-Ser-Leu-His-Gly-Met-Asp-Asp-Pro-Glu-Arg-Glu-Val-Leu-Glu-Trp-Arg-Phe-Asp-Ser-Arg-Ieu-Ala-Phe-His-His-Val-Ala-Arg-Glu-Leu-His-Pro-Glu-Tyr-Phe-Lys-Asn-Cys;

- (b) reagents for the detection of the formation of antigenantibody complex; and
- (c) a biological/reference sample lacking antigens recognized by said artibody/composition,

wherein the antibody composition, reagents, and biological reference sample are present in an amount sufficient to perform the detection of artigen-antibody complex formed between said antibody and antigens present in said biological sample.

34. The kit of claim 33, wherein said antibody is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.--

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